

## LOW-LEVEL WASTE

### Part II

**Directions:** Study and complete the table and pie chart below for low-level waste volumes disposed of in the U.S. as of 1993. Then construct a pie chart (circle graph) for low-level waste disposed of in your State and compare the two charts.

### Percentages of low-level waste disposal in the United States

- Complete the U.S. volume-to-degree conversions as practice before calculating percentages for your own State. For example, to get the academic source percentage of low-level waste for the pie chart below:

$$12,172 \div 792,182 = 0.0154 \text{ (source/total)}$$

$$\text{convert to percent} = 1.5\% \text{ (rounded to nearest half-percent)}$$

$$\text{convert to degrees} = 1.5\% \times 360^\circ \div 100\% = 5.4^\circ$$

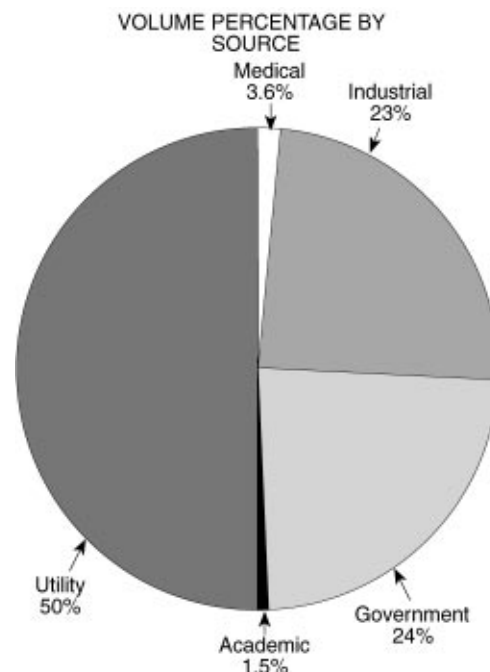
(See the electricity production enrichment activity Making a Pie Chart - United States, or ask your teacher for help in converting volumes to percents and degrees.)

- Fill in the missing percentages and degrees for the pie chart below.

### Low-Level Waste Disposed of in the United States:

| Source       | Volume<br>(Cubic Feet) | Decimal<br>Fraction | Percent       | Degrees       |
|--------------|------------------------|---------------------|---------------|---------------|
| Academic     | 12,172                 | <u>0.0154</u>       | <u>1.5%</u>   | <u>5.4°</u>   |
| Government   | 191,349                | <u>0.2415</u>       | <u>24%</u>    | <u>86.4°</u>  |
| Industrial   | 184,760                | <u>0.2332</u>       | <u>23%</u>    | <u>82.8°</u>  |
| Medical      | 5,136                  | <u>0.0065</u>       | <u>1%</u>     | <u>3.6°</u>   |
| Utility      | <u>398,765</u>         | <u>0.5034</u>       | <u>50%</u>    | <u>80°</u>    |
| <b>Total</b> | <b>792,182</b>         |                     | <b>99.5%*</b> | <b>358.2°</b> |

\* Percentage total does not equal 100% due to rounding error.



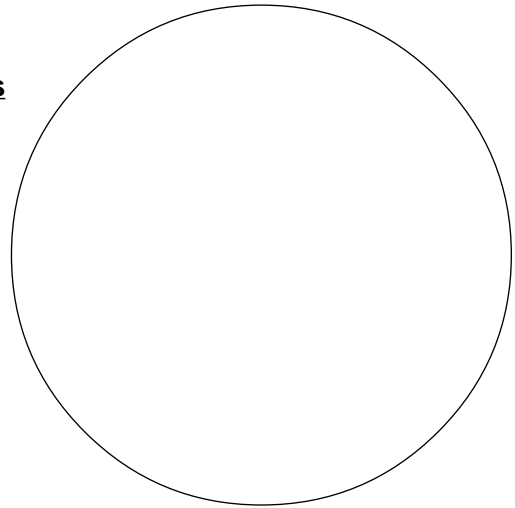
### Percentages of low-level waste disposal in your State

Using the data given in the table entitled *1993 Sources and Volumes of Low-Level Waste Received at Disposal Sites*, make a pie chart to show the percentage of low-level waste disposed of by your home State in 1993 that came from each of the following sources: academic, government, industrial, medical, and electrical utilities. (If your home State did not dispose of low-level waste at one of the disposal sites in 1993, or if all the waste disposed of came from a single source, use the data for the compact your State belongs to or a neighboring State.)

1. Identify below the State for which calculations are being made and write in the volumes from the table entitled *1993 Sources and Volumes of Low-Level Waste Received at Disposal Sites*.
2. Calculate the fraction, expressed as a decimal, of the total for each source.
3. Round off and convert the decimal to percent.
4. Figure the number of degrees of a circle that will represent each percentage. (Remember that a circle has  $360^\circ$ . This means 50% will equal  $180^\circ$ , 25% will equal  $90^\circ$ , 10% will equal  $36^\circ$ , etc.)
5. Using a protractor, use the circle below to make your pie chart.
6. Label the pie chart with the percentages and the categories they represent.

Low-Level Waste Disposed of in \_\_\_\_\_: VOLUME PERCENTAGE BY SOURCE

| <u>Source</u> | <u>Volume<br/>(Cubic Feet)</u> | <u>Decimal<br/>Fraction</u> | <u>Percent</u> | <u>Degrees</u> |
|---------------|--------------------------------|-----------------------------|----------------|----------------|
| Academic      | _____                          | _____                       | _____          | _____          |
| Government    | _____                          | _____                       | _____          | _____          |
| Industrial    | _____                          | _____                       | _____          | _____          |
| Medical       | _____                          | _____                       | _____          | _____          |
| Utility       | _____                          | _____                       | _____          | _____          |
| <b>Total</b>  | _____                          |                             |                |                |



(Answers will vary)